Civil Aviation Authority
United Kingdom

TYPE-CERTIFICATE DATA SHEET

UK.TC.R.00077

For

EC175

Type Certificate Holder

Airbus Helicopters

Aéroport International Marseille – Provence

13725 Marignane CEDEX

France

Model(s): EC 175 B

Issue: 2

Date of issue: 10 July 2024

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Note: In this TCDS, references to EU regulations are to those regulations as retained and amended in UK domestic law under the European Union (Withdrawal) Act 2018 and are referenced as “UK Regulation (EU) year/number or UK Regulation (EU) No. number/year”

Section 1 General

This Type-Certificate Data Sheet (TCDS) is the concise definition of the type-certificated product accepted and or approved by the CAA in the UK for the affected types and models.

This TCDS includes:

- Details of the type design that affect the TCDS that have been approved or accepted by the CAA in the UK from 01 January 2021.
- Details of the type design that affected the TCDS and were approved or accepted by EASA before 01 January 2021, and were incorporated into EASA.R.150 Issue 8 dated 14 February 2020, and are therefore accepted by the UK under Article 15 of Annex 30 of the UK-EU Trade and Cooperation Agreement.

Section 2 EC175 B

I. General

1. Type/ Model/ Variant

1.1	Type	EC 175
1.2	Model	EC 175 B

2. Airworthiness Category

Large Rotorcraft, Category A and B

3. Type Certificate Holder

Airbus Helicopters
Aéroport International Marseille – Provence
13725 Marignane CEDEX, France

4. Manufacturer

See Section 3 Administration, subsection II.3 Production Organisation Approval Holder

5. Type Certification Application Date

15 February 2007

6. State of Design Authority

European Union Aviation Safety Agency (EASA)

7. EASA Type Certification Date

30 January 2014

8. UK CAA Type Validation Application Date

Prior to 31 December 2020, application dates for type certification are covered by EASA type certification application dates, as per Para 5 above.

New applications for UK CAA type validation received after 01 January 2021 will be recorded in this section. At the current issue of this UK CAA TCDS, no new applications for type validation have been received since 01 January 2021.

9. UK CAA Type Validation Date

Prior to 31 December 2020, dates of type certification are covered by EASA type certification, as per Para 7 above.

UK CAA type validation dates after 01 January 2021 will be recorded in this section. At the current issue of this UK CAA TCDS, no UK CAA type validations have been completed since 01 January 2021.

II. Certification Basis

1. Reference Date for determining the applicable requirements

For Airworthiness and Environmental Protection: 1 March 2009

For OSD elements, 13 February 2014, Ref. EC 175 ORI 4, Issue 2

2. Airworthiness Requirements

CS 29, Amdt. 2 – Large Rotorcraft (EASA Decision 2008/010/R);

CS 29.1309 (a), (b)(2), (c), (d) Amdt. 4 as interpreted by F-39

- CS 29.610 Amdt. 4, limited to HELIONIX step 3.2 (MOD 99A05288-00 and 99A05289-00 and 99A05290-00), or later approved
- CS 29.1316 Amdt. 4, limited to HELIONIX step 3.2 (MOD 99A05288-00 and 99A05289-00 and 99A05290-00), or later approved
- CS 29.1317 Amdt 4, limited to HELIONIX step 3.2 (MOD 99A05288-00 and 99A05289-00 and 99A05290-00), or later approved

- CS 29.1465 Amdt. 5, when configured with: HUMS DMAU P/N: M313A10A1002 (or later approved), MFD and AMC HELIONIX V5.1 Step 2+ SW (or later approved), and/or, DMAU P/N: M313A10A1003 (or later approved), MFD and AMC HELIONIX V6.0 Step 3 SW (or later approved).
- CS29.1555(d)(2) Amd. 11 and CS29.811 (h)(2) Amd. 11, when configured with 99A04098-00-M-ECP / 01, 99A04099-00-M-ECP / 00, 99A04100-00-M-ECP / 00, and 99A04314-00-M-ECP / 00 (or later approved)
- CS29.1587(c) Amd. 11
- Appendix E Amdt.4 limited to HELIONIX step 3.2 (MOD 99A05288-00 and 99A05289-00 and 99A05290-00), or later approved
- CS-ACNS, Initial Issue, dated 17 December 2013, Subpart A and D

3. Special Conditions

- CRI E-01: Extended Take-Off Power Duration
- CRI F-01: HIRF Protection, except for HELIONIX step 3.2 (MOD 99A05288-00 and 99A05289-00 and 99A05290-00), or later approved
- CRI B-02: SAR Modes Certification, see Note 8
- CRI F-30: Helicopter Limited Icing Approval, see Note 9
- CRI F-13: Non-rechargeable lithium battery installations

4. Exemptions

None

5. Deviations

ADS-B Out Extended Squitter & EHS Installation with Transponder TDR-94D equipment (F-32), see Note 7

6. Equivalent Safety Findings

- Fatigue evaluation of structure (C-02)
- Fire in cargo and baggage compartments (D-04)
- Main aisle width (D-05)
- Passenger emergency exits other than side of fuselage (D-06)
- Ditching emergency exits (D-07)
- Passenger emergency exit access (D-10)
- Emergency exit marking (D-12)
- Fire detector electrical circuit testability in flight (E-07)
- Cigalhe system: part time display of vehicle parameters (F-03)
- Independent power source for stand-by attitude indicator (F-04), see Note 14
- Airspeed and powerplant indicators green arc (G-01)
- Powerplant instruments marking during Engine training mode (G-03)
- Hoist Installation (D-14)
- Green running man emergency exit pictogram (D-15)
- Rotor drive system and control mechanism tests: Main gearbox endurance and additional test by closed loop test rig (E-09)

7. Requirements Elected to Comply

None.

8. Envromental Protection Requirements

8.1 Noise Requirements

ICAO Annex 16, Volume I, Part II, Amdt. 10, Chapter 8 (EASA CS-36, Amdt. 3)

ICAO Annex 16, Volume I, Part II, Amdt. 11B, Chapter 8 (EASA CS-36, Amdt. 4)

For details see TCDSN UK.TC.R.77

8.2 Emission Requirements

Fuel venting: ICAO Annex 16, Volume II, Part II, Chapter 2 (CS-34)

9. Operational Suitability DATA (OSD)

9.1 Master Minimum Equipment List (MMEL)

CS-MMEL, Initial Issue

9.2 Flight Crew Data (FCD)

CS-FCD, Initial Issue

9.3 Simulation Data (SIMD)

Reserved.

9.4 Maintenance Certifying Staff Data (MCSD)

Reserved.

III. Technical Characteristics and Operational Limitations

1. Type Design Definition

Basic Helicopter: TNM000A1517E99/D
Optional installations: TNM000A2544E99/D

2. Description

Large twin-engine passenger transport helicopter category A and B

Main rotor: Spheriflex, 5 blades
Tail rotor: Spheriflex, 3 blades
Landing gear: tricycle retractable
Powerplant: 2 independent turbines

3. Equipment

As required by compliance with the Certification Basis and listed in the Type Design Definition documents

4. Dimensions

4.1 Fuselage

Length: 15.68 m
Width 3.35 m
Height: 4.84 m

4.2 Main Rotor

Diameter: 14.80 m

4.3 Tail Rotor

Diameter: 3.20 m

5. Engine

5.1 Model

Pratt & Whitney Canada

2 x Model PT6C-67E

5.2 Type Certificate

CAA TC/TCDS No.: EASA.IM.E.022

5.3 Limitations

5.3.1 Installed Engine Limitations and Transmission Limits

5.3.1.1 All Engine Inoperative (OEI) limits

	N1 [% (rpm)]	TOT [°C]	TQ [%]
Max Transient PWR (20 sec)	105.4 (39 500)	820	only allowed up to V_y 2 x 110
Max TOP (5 min)	104.6 (39 200)	815	only allowed up to V_y 2 x 100
MCP (unlimited)	102.7 (38 500)	775	2 x 93.2
Extended PWR (30 min continuous, 50 min cumulated/flight)	104.6 (39 200)	815	2 x 100

5.3.1.2 One Engine Inoperative (OEI) limits

	N1 [% (rpm)]	TOT [°C]	TQ [%]
Overshoot	---	---	165.7
OEI HI (30 sec)	111 (41 600)	915	153.4
OEI LO (2 min)	108 (40 500)	865	136.4
OEI CT (unlimited)	105.4 (39 500)	820	119.3

5.3.1.3 Other Engine limits: Refer to approved RFM

6. Fluids

6.1 Fuel

Types of fuel	NATO Code	Specifications			
		USA	UK	France	Other
Kerosene-50 (AVTUR FSII) JP-8 [-45°C< Tp <+55°C]	F34	MIL-DTL 83133	DEF.STAN. 91-87	DCSEA 134	STANAG 3747
Kerosene 50 (AVTUR) JET-A1 [-45°C< Tp <+55°C]	F35	ASTM-D-1655 MIL-DTL 83133	DEF.STAN. 91-91	DCSEA 134	STANAG 3747 / GOST R 52050-2006
High Flash Point (AVCAT FSII) JP-5 [-45°C< Tp <+55°C]	F44	MIL-DTL 5624	DEF.STAN. 91-86	DCSEA 144	- - -

Note: For alternative authorized fuel and authorised additives refer to approved RFM

6.2 Oil

6.2.1 Engine Lubricants

Types of oil	NATO Code	Specifications
Synthetic 3 cSt oils (restricted use)	- - -	MIL-PRF-7808L Type I (3 cSt)

Average synthetic 5 cSt	0-156 Normal	MIL-PRF-23699F Type II (5 cSt)

Note: For further details refer to approved RFM

6.2.2 MGB, IGB and TGB Lubricants

Types of oil	Conditions	Specifications		
		USA	UK	France
NATO O-155 mineral oil, 8 cSt	OAT > - 20°C	MIL.L 6086.D	DTD 581 C OEP .70	AIR 3525
			Foaming index 20-0 ml max at 93°C	
NATO O-155 mineral oil, 8 cSt	OAT > - 25°C	MIL.L 6086.D	DTD 581 C OEP .70	AIR 3525
			Foaming index 20-0 ml max at 93°C	

Note: For further details refer to approved RFM

6.2.3 Hydraulic Fluids

MIL-H-83282C or MIL-PRF-83282D (NATO code H-537) only

6.3 Additives

n/a

7. Fluid capacities

7.1 Fuel

Standard fuel tank
Fuel tank total capacity: 2 616 litres
Unusable fuel: 17.7 litres

7.2 Oil

Engine (each): 8.0 litres
MGB: 21.0 litres
IGB: 1.0 litre
TGB: 1.5 litres

Hydraulic:
Main supply I: 5.0 litres
Main supply II: 9.0 litres

7.3 Coolant System Capacity

n/a

8. Air Speed Limitations

V_{NE} PWR On:
from -1 500 ft Hp to 3 000 ft Hp: 175 KIAS
For reduction of V_{NE} with altitude, refer to approved RFM.
$V_{NE\ PWR\ Off}$: $V_{NE\ PWR\ On}$ - 40 KIAS
Refer to approved RFM for other speed limitations.

9. Rotor Speed Limitations

Power on: [rpm (%)]:

Maximum	298.5	(107)
Reference	279.0	(100)
Minimum continuous	265.2	(95)
Minimum transient AEO and OEI	231.7	(83)

Power off:

Maximum transient (20 s)	326.7	(117)
Maximum continuous	307.1	(110)
Minimum continuous	244.3	(87.5)
Minimum transient	231.7	(83)

10. Maximum Operating Altitude and Temperature

10.1 Altitude

For TKOF/LDG:
Category A: from -1 500 ft Hp up to +13 000 ft Hσ
Category B: from -1 500 ft Hp up to +13 000 ft Hσ
For flight:
from -1 500 ft Hp to +15 000 ft Hσ

10.2 Temperature

From -40°C to ISA+40°C limited to OAT +50°C

For variation of Temperature limitations with altitude, refer to approved RFM and applicable Supplements.

11. Operating Limitations

VFR day and night
IFR
Falling and blowing snow (see Note 10)
Limited icing conditions (see Note 11)

12. Maximum Mass

Max gross mass in-flight:	7 500 kg
Max gross mass on-ground:	7 550 kg
Max gross mass in-flight:	7 800 kg, see Note 12
Max gross mass on-ground:	7 850 kg, see Note 12

13. Centre of Gravity Range

Refer to approved RFM [Section 2.2] and applicable

Supplements (as for Extended Aft Centre of Gravity Envelope and Hoist Installation).

14. Datum

Longitudinal:
the datum plane (STA 0) is located at 7 000 mm forward of main rotor centre line
Lateral:
fuselage symmetry plane

15. Levelling Means

Levelling reference marking on upper deck on LH side near to frame 4 MGB

16. Minimum Flight Crew

VFR: 1 pilot (right seat)
IFR: 2 pilots, or,

1 pilot under conditions and limitations included in the Supplement 6 of the RFM (specific to aircraft equipped with MOD 99A05684-00)

17. Maximum Passenger Seating Capacity

up to 18

18. Passenger Emergency Exit

Basic and Public Services (PS) internal arrangements:

10 exits, of which are:

4 exits on each side of the passenger cabin

1 exit on each side of the cockpit

VIP internal arrangements as defined in the approved

EC 175 RFM SUP.57: 6 exits, of which are:

2 exits on each side of the passenger cabin,

1 exit on each side of the cockpit.

19. Maximum Baggage/ Cargo Loads

Cargo floor max load: 300 kg

Cargo floor max unit load: 160 kg/m²

See approved RFM for complementary limitations and specific loading conditions.

20. Rotor Blade Control Movement

For rigging information refer to Maintenance Manual

21. Auxiliary Power Unit (APU)

n/a

22. Life-limited Parts

See approved ALS Chapter 4 of the Maintenance Servicing Manual

23 Wheels and Tyres

		Wheels	Tyres
	nose	C 20525 000	15x6.00-6
	main	C 20147 200	615 x 225-10

IV. Operating and Service Instructions

1. Flight Manual

EC 175 B Flight Manual, Normal Revision 0, date code 18-22, approved by EASA on 12 October 2018, or subsequent approved issues;

EC 175 B Flight Manual, Normal Revision 0 NGEN, date code 23-35, approved by EASA on 7 June 2024, or subsequent approved issues

2. Maintenance Manual

Airworthiness Limitations as EC 175 Maintenance Servicing Manual, Chapter 04, edition 2014.01.08, Rev. 000, approved by EASA on 30 January 2014, or subsequent approved issues

Maintenance Servicing Manual EC 175 and Aircraft Maintenance Manual EC 175 as published by Airbus Helicopters.

3. Structural Repair Manual

Structural Repair Manual EC 175, as published by Airbus Helicopters

4. Weight and Balance Manual

Section 6 of Complementary Flight Manual EC 175, as published by Airbus Helicopters

5. Illustrated Parts Catalogue

Illustrated Parts Catalogue EC 175, as published by Airbus Helicopters

6. Service Letters and Service Bulletins

Service Letters and Service Bulletins EC 175, as published by Airbus Helicopters

7. Required Equipment

As per compliance with Certification Basis and in accordance with the Type Design Definition.
Refer to approved Flight Manual and MMEL

V Operational Suitability Data

The OSD elements listed below that were approved prior to 2020 have been approved by the European Union Aviation Safety Agency (EASA) as per Commission Regulation (EU) 748/2012, as amended by Commission Regulation (EU) No 69/2014.

Revisions since 2020 will be approved by the UK CAA in accordance with Regulation (EU) No. 748/2012 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018 and amended by the Aviation Safety (Amendment etc.) (EU Exit) Regulations 2019.

1. Master Minimum Equipment List (MMEL)

Master Minimum Equipment List EC 175 B for aircraft equipped with the modification 99A03550-00-M-ECP or 99A04155-00-M-ECP (“STP2” variant), Normal Revision 0, Date-code 16-04, or later CAA-approved revisions

Master Minimum Equipment List EC 175 B , Normal Revision 0 Issue 2, Date-code 18-22, or later CAA-approved revisions

Specific Master Minimum Equipment List EC 175 B for aircraft equipped with the modification 99R06102-00-M-ECP, Normal Revision 0, Date-code 21-39, or later CAA-approved revisions

2. Flight Crew Data

Flight Crew Data for EC 175, Normal Revision 0, dated 24 September 2015, or later CAA-approved revisions

3. SIM Data

Reserved.

4. Maintenance Certifying Staff Data

Reserved

VI Notes

1. Manufacturer's eligible serial numbers: s/n 5002, and subsequent.

2. Cabin interior and seating configurations must be approved, if differing from the Type Design Definition

3. The certified “optional” installations are each approved independently of the basic helicopter and an approved RFM Supplement is associated to each optional installation if necessary.

4 The EC 175 B is certified as Category A rotorcraft with operating limitations as defined in the relevant approved RFM Supplement

5. The EC 175 B is certified for Ditching with the optional installations and operating procedures as defined in the relevant approved Flight Manual Supplement

6. Designation: “H175” is the trade name for helicopters of Type Certificate “EC 175 B”

7. Deviation (CRI F-32) “ADS-B Out Extended Squitter & EHS Installation with Transponder TDR-94D equipment” (as per CRI F-32) is only applicable to EC 175 B aircraft equipped with Modifications No. 99A03906-00-M-ECP and 99A03907-00-M-ECP.

8. Special Condition (CRI B-02) “System Search and Rescue (SAR) modes certification” (as per B-02) is only applicable to EC 175 B aircraft featured with Automatic Flight Control System SAR modes as defined in the approved RFM SUP.5.

9. Special Condition CRI F-30 “Helicopter Limited Icing Approval” is only applicable to EC 175 B aircraft configured as defined in the approved EC 175 RFM SUP.4.

10. The EC 175 B is certified for flight in falling and blowing snow according to the limitations and conditions as defined in the approved RFM SUP.80.

11. The EC 175 B is certified for flight in limited icing conditions according to the limitations and conditions as defined in the approved EC 175 RFM SUP.4.

12. Max gross mass in-flight 7 800 kg, and max gross mass on-ground 7 850 kg are only applicable to

EC 175 B rotorcraft equipped with Helionix Step 2+ (Mod. 99A04792-00-M-ECP, or 99A04793-00-M-ECP), or later EASA-approved versions and Avionics Primary Configuration File (PCF) set to 7 850 kg.
Operations in Cold Weather conditions (from -15 ˚C down to -40 ˚C), Category A operations from Ground Helipads (as per RFM SUP. 1) and in the Extended Aft CG Flight Envelope (as per RFM SUP. 2) are limited to 7 500 kg.
Category A operations from Elevated Helipads (as per RFM SUP. 1) are limited to 7 600 kg.

13. Equivalent Safety Finding on “Independent power source for stand-by attitude indicator” superseded by EC 175 B Flight Manual, Normal Revision 10 date code 16-30 and EC 175 B Flight Manual for aircraft equipped with the modification 99A03550-00-M-ECP or 99A04155-00-M-ECP (“STP2” variant), Normal Revision 4 date code 16-30.

Section 3 Administrative

I. Acronyms and Abbreviations

Acronym / Abbreviation	Definition
AEO	All Engines Operative
AMC	Aircraft management Computer
C.G	Centre of Gravity
CGx	Centre of Gravity on the x axis
CGy	Centre of Gravity on the y axis
CS	Certification Specifications
cSt	Centistoke
Dev	Deviation
DMAU	Digital Monitoring Acquisition Unit
ESF	Equivalent Safety Finding
Hp	Pressure altitude
Hσ	Density Altitude
HUMS	Health and Usage Monitoring System
FCD	Flight Crew Data
HIRF	High Intensity Radiated Field
IFR	Instrumental Flight Rules
ISA	Internat Standard Atmosphere
KIAS	Knots Indicated Air Speed
LDG	Landing
LH	Left Hand
Max	Maximum
MCP	Maximum Continuous Power
MFD	Multi-Functional Display
Min	Minutes
MMEL	Master Minimum Equipment List
OAT	Outside ne Engine Inoperative
OEI	One Engine Inoperative
OSD	Operational Suitability Data
PS	Public Services
PWR	Power
RFM	Rotorcraft Flight Manual
s/n	Serial Number
SC	Special Condition
sec	Seconds
STA	Station
SW	Software
TKOF	Take-off
TOP	Take-off Power
VFR	Visual Flight Rules
VNE	Never Exceed Speed
VNE PWR On	Never Exceed Speed Power On

II. Type Certification Holder Record

II.1 Type Certificate Holder	Period
Airbus Helicopters Aéroport International Marseille – Provence 13725 Marignane CEDEX, France	Since 30 January 2014

II.2 Production Organisation Approval Holder (21.A.135)	Period
Airbus Helicopters Aéroport International Marseille – Provence 13725 Marignane CEDEX, France	Since 30 January 2014

III. Amendment Record

TCDS Issue No.	TCDS Issue Date	Changes	TC issue and Date
Issue 1	3rd April 2023	The content of the initial issue of this UK CAA TCDS was taken from EASA TCDS No. EASA.R.150 Issue 8 dated 14 February 2020 which was the current EASA version at 31 December 2020 and therefore the version of the TCDS for the EC175 accepted by the UK under Article 15 of Annex 30 of the UK-EU Trade and Cooperation Agreement. The following updates were also added in this initial issue of the TCDS to reflect the state of TCDS EASA.R.150 issue 10 dated 1 Apr 2022, including; - EASA MCA 10074576 dated 15 Oct 2020: non-significant major change 99A04844-00-M-ECP/02, and - Special Condition F-13: for any new installation or modification of an equipment powered by non-rechargeable lithium battery.	Initial Issue, 27 April 2023
Issue 2	10 July 2024	Section 1 – General added Added to section 2 i. Para 8 and 9 Deleted from section 2 IV.1: Obsolete editions of flight manuals Deleted from section 2 V.1, OSD elements 1: Obsolete editions of the MMEL Added in section 2: - II.2, CS29.1555(d)(2) and CS29.811 (h)(2),Amendment 11. II.2, CS29.1587(c), Amendment 11. IV.1, EC 175 B Flight Manual, NR0 NGEN.	Initial Issue, 27 April 2023

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